

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) An isolated polynucleotide segment comprising: a first polynucleotide sequence, or the full complement of the entire length of the first polynucleotide sequence, wherein the first polynucleotide sequence is selected from the group consisting of:

- (a) a polynucleotide consisting of SEQ ID NO:1; and
- (b) a nucleic acid sequence identical to the polynucleotide of (a) except that, over the entire length corresponding to the polynucleotide of (a), up to **thirty** nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (a).

2. (Previously Presented) The isolated polynucleotide segment of claim 1, wherein the first polynucleotide sequence is selected from the group consisting of: the polynucleotide of (a); and, a nucleic acid sequence identical to the polynucleotide of (a) except that, over the entire length corresponding to the polynucleotide of (a), up to **ten** nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (a).

3. (Previously Presented) The isolated polynucleotide segment of claim 1, wherein the first polynucleotide sequence is selected from the group consisting of: the polynucleotide of (a); and, a nucleic acid sequence identical to the polynucleotide of (a) except that, over the entire length corresponding to the polynucleotide of (a), up to **five** nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (a).

4. (Previously Presented) A vector comprising the isolated polynucleotide segment of Claim 1.

5. (Previously Presented) An isolated host cell comprising the vector of claim 4.

6. (Previously Presented) An isolated polynucleotide segment, comprising a first polynucleotide sequence, of the full complement of the entire length of the first polynucleotide sequence, wherein the first polynucleotide sequence is selected from the group consisting of:

- (a) a polynucleotide which encodes the same mature polypeptide, expressed by the ribG gene expressed by a polynucleotide comprising SEQ ID NO:1 contained in *Staphylococcus aureus* WCUH 29 contained in NCIMB Deposit No. 40771; and,
- (b) a nucleic acid sequence identical to the polynucleotide of (a) except that, over the entire length corresponding to the polynucleotide of (a), up to **five** nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (a).

7. (Previously Presented) The isolated polynucleotide segment of claim 6, wherein the first polynucleotide sequence is selected from the group consisting of: the polynucleotide of (a); and, a

nucleic acid sequence identical to the polynucleotide of (a) except that, over the entire length corresponding to the polynucleotide of (a), up to **three** nucleotide are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (a).

8. (Previously Presented) An isolated polynucleotide segment, comprising a first polynucleotide sequence or the full complement of the entire length of the first polynucleotide sequence, wherein the first polynucleotide sequence hybridizes to the full complement of SEQ ID NO:1, wherein the hybridization conditions include incubation at 42°C in a solution comprising: 50% formamide, 5x SSC (150mM NaCL, 15mM trisodium citrate), 50mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 micrograms/ml denatured, sheared salmon sperm DNA, followed by washing in 0.1xSSC at about 65°C.

9. (Previously Presented) The isolated polynucleotide segment of claim 8, wherein the first polynucleotide sequence is identical to SEQ ID NO:1 except that, over the entire length corresponding to SEQ ID NO:1, up to five nucleotide are substituted, deleted or inserted for every 100 nucleotides of SEQ ID NO:1.

10. (Previously Presented) The isolated polynucleotide segment of claim 8, wherein the first polynucleotide sequence is identical to SEQ ID NO:1 except that, over the entire length corresponding to SEQ ID NO:1, up to three nucleotide are substituted, deleted or inserted for every 100 nucleotides of SEQ ID NO:1.

11. (Previously Presented) An isolated polynucleotide segment, comprising a first polynucleotide sequence or the full complement of the entire length of the first polynucleotide sequence, wherein the first polynucleotide sequence is selected from the group consisting of:

(a) a polynucleotide which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2; and,

(b) a nucleic acid sequence identical to the polynucleotide of (a) except that, over the entire length corresponding to the polynucleotide of (a), up to **five** nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (a).

12. (Previously Presented) A vector comprising the isolated polynucleotide segment of Claim 11.

13. (Previously Presented) An isolated host cell comprising the vector of claim 12.

14. (Previously Presented) The isolated polynucleotide segment of claim 11, wherein the first polynucleotide sequence is selected from the group consisting of:

(a) a polynucleotide which encodes a polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2; and,

(b) a nucleic acid sequence identical to the polynucleotide of (a) except that, over the entire length corresponding to the polynucleotide of (a), up to **five** nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (a).

15. (Previously Presented) A vector comprising the isolated polynucleotide segment of claim 14.

16. (Previously Presented) An isolated host cell comprising the vector of claim 15.

17. (Previously Presented) A composition comprising the isolated polynucleotide segment of claim 1, which isolated polynucleotide segment is according to the formula:



wherein, at the 5' end of the molecule, X is hydrogen, and at the 3' end of the molecule, Y is hydrogen or a metal, R_1 and R_3 are any nucleic acid residue, m is an integer between 1 and 3000 or zero, n is an integer between 1 and 3000 or zero, and R_2 is the first polynucleotide sequence.

18. (Previously Presented) An isolated polynucleotide segment comprising: a first polynucleotide sequence, or the full complement of the entire length of the first polynucleotide sequence, wherein the first polynucleotide sequence is selected from the group consisting of:

(a) a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:4;

(b) a polynucleotide consisting of SEQ ID NO:3; and,

(c) a nucleic acid sequence identical to the polynucleotide of (b) except that, over the entire length corresponding to the polynucleotide of (b), up to thirty nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (b).

19. (Previously Presented) The isolated polynucleotide segment of claim 18, wherein the first polynucleotide sequence is selected from the group consisting of: the polynucleotide of (b); and, a nucleic acid sequence identical to the polynucleotide of (b) except that, over the entire length corresponding to the polynucleotide of (b), up to ten nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (b).

20. (Previously Presented) The isolated polynucleotide segment of claim 18, wherein the first polynucleotide sequence is selected from the group consisting of: the polynucleotide of (b); and, a nucleic acid sequence identical to the polynucleotide of (b) except that, over the entire length corresponding to the polynucleotide of (b), up to five nucleotides are substituted, deleted or inserted for every 100 nucleotides of the polynucleotide of (b).